

A G E N D A

Manure Management Task Force

9:30 a.m. to 3:30 p.m.
November 21, 2005

Board Room
2811 Agriculture Drive, Madison
Department of Agriculture, Trade, and Consumer Protection

9:30 A. M.

1. Call to Order
2. Roll Call

9:40 A.M.

3. Born and Rude, Task Force Co-Chairs

 € Approve meeting notes

10:00 A.M.

4. *Member Presentation:* Manure events and lake impacts

10:15 A. M.

5. *Co-Chairs Introduction:* Preliminary findings and recommendations

10:30 A. M.

6. *Group Discussion:* Review and adoption of preliminary findings and recommendations

11:45 A. M. to 12:30 P.M.

Lunch

12:30 P.M.

7. *Group Discussion(cont.):* Review and adoption of preliminary findings and recommendations

3:00 P.M.

8. Co-Chairs: Meeting Wrap Up

- ∅ Finalize listening sessions: Volunteers for sessions
- ∅ Review agenda for next meetings

9. Task Force Member Check Out

3:30 P.M.

10. Adjournment

DRAFT
Manure Task Force Meeting
October 20, 2005, DATCP Board Room, Madison

Task Force members in attendance:

Brian Rude, Co-Chair	Dairyland Power; DATCP Board	Dana Cook	Manure Hauler, Sauk Co.
Steve Born, Co-Chair	Retired UW Professor	Kevin Connors	Dane Co. Dept. of Land & Water Resources
Monte Wick	Farmers Coop. Supply & Shipping		
Andrew Hanson	Midwest Environmental Advocates	Robert Selk	Trout Unlimited
Jay Richardson	Prof. Dairy Producers of WI	Kevin Erb	UW-Extension
Richard Gorder	WI Farm Bureau Federation Board	Dan Brick	Dairy Business Assoc.
Rebecca Power	River Alliance of WI		
Ken Blomberg	Rural Water Assoc.	Task Force members absent	
Dan Fischer	Manitowoc Co. Exec.	None absent	
Lisa Conley	WI Assoc. of Lakes		
Wally Lueder	WI Farmers Union	Also in attendance: ~ 15 agency staff & others	

Upcoming meetings

- € **Monday, November 21st**, DATCP Boardroom, Madison. Task Force members will work through the preliminary recommendation as prepared by the Co-Chairs and staff.
- € **Thursday, Dec 15th**. Three meetings will be held simultaneously at Eau Claire, Manitowoc, and Madison to gather public input on the preliminary recommendations. Task Force members can attend the location of their choice. Task Force members recommended holding two back-to-back sessions at each location: 1-3 PM (better for farmers) and 4-6 PM (better for non-farming public). Staff will present a brief PowerPoint overview of the preliminary recommendations.
- € **Thursday, January 19th**, DATCP Boardroom, Madison. Members will consider public input, modify and finalize the Task Force's recommendations.

Action Items

- € Co-Chairs and agency staff compile a list of preliminary recommendations for the Task Force to discuss at November meeting.
- € Investigation protocols: Agency staff use existing tools to create an investigation protocol template for manure runoff incidents. (Use DATCP protocols on investigating pesticide spills/incidents; DNR Animal Waste Investigators Handbook.)
- € Manure Runoff Event Database—Data collection: Agency staff will put together some data requirements and procedures as a draft for Task Force to address and return it to the Task Force before the next meeting—get Gorder, Erb, Hanson's input before sending to group.
- € Agency staff, in consultation with Co-Chairs, draft incentives for creating an EMS or superior performance plan (including an Emergency Response Plan), examining potential incentives ranging from technical/financial assistance that could be redirected/leveraged, reduced liability (insurance or other mechanisms), regulatory relief or adaptation, discretionary authority. Bring it back to the Task Force to consider.
- € Kevin Erb & agency staff summarize how other states have defined "commercial hauler" (specific trigger volume, or ownership of equipment, etc.), what other states are doing for certification, and associated costs.
- € DNR Drinking & Groundwater staff compile options for including bacterial contamination (specifically from manure) in the well compensation regulations, and determine the current source of funding for the well compensation program.
- € DATCP staff determine whether there is a possibility of a \$2 surcharge on the price of a gallon of milk to help dairy farmers cover the costs of complying with regulations, or other ways to pass on the costs to the consumer.
- € Agency staff lay out options for ways to get NMPs into place on more (all?) farms.
- € Attach the Executive Summary of DNR's Water Monitoring Strategy to the minutes.
- € For next meeting
 - Provide information on whether the Brown County ordinance is going to be acceptable (noted that because DNR is just starting to address this lucid answers may not yet be available).
 - Still need to discuss phosphorus standards. In order to be able to measure effectiveness of BMPs, we need to have a water quality criterion for phosphorus in place. Recommend completion of it ASAP, along with planning through TMDLS and BMPs to implement the criteria once it is in place. Lake standards have been put on hold until the river ones are complete—need to discuss on whether that is actually the best approach. Also, focus on

lakes on the downslide (threatened by degradation or especially vulnerable) rather than targeting TMDLs toward the most highly impacted, already degraded waterbodies.

Logistics

- € Roll Call
- € September 2005 meeting minutes approved
- € Handouts provided by staff in response to questions raised from the September meeting include:
 - *Responses to Action Items from September 26th MMTF meeting*
 - Memo & attachments RE: *Request for information regarding cost of fish kill on the West Branch of the Sugar River*
 - *Farm Commodity Programs: A Short Primer* (CRS Report for Congress)
 - *Soil and Water Quality: An Agenda for Agriculture* (Committee on Long-Range Sol & Water Conservation Policy, National Research Council, 1993)
 - *Status of the Phosphorus Water Quality Standard in Wisconsin* (DNR)
 - *303(d) Impaired Waters and TMDLs-Frequently Asked Questions* (DNR)
 - *Links to Published Models, Research, and Literature related to Manure Runoff* (DATCP)
 - *Local regulatory authority, standards and issues related to winter spreading* (DATCP)
 - Conference Brochure: *Exploring the Profit Potential of Cow Manure: First Annual Manure Bio-Conversion Technology Conference* (Jan. 31 2006)
 - News clipping: *Report calls threats to region's farms threats to Chesapeake* (Bay Journal, October 2005)

Purpose of the October meeting:

To build on the progress of last month's meeting in discussion of the matrix and cover the remaining topics in the matrix. After this meeting, staff will synthesize the discussion into preliminary recommendations, which will be brought back to the Task Force in November.

- € Discussed adding the December public input meetings and additional January Task Force meeting:
 - Co-Chairs discussed the need for public input into the recommendation process, and explained that this necessitates an extra Task Force meeting in January. Some members were opposed to adding an additional meeting. Others agreed with the need for an extra session for public input, and stressed that the public comments must be considered and incorporated if appropriate before the recommendations are finalized.
 - Group recognized that December is a difficult time to get public attendance but that the time frames in place did not allow for a better option. To make the meetings most accessible, Task Force members recommended holding two back-to-back sessions at each location: 1-3 PM (better for farmers) and 4-6 PM (better for non-farming public).

Wisconsin Ag Stewardship Initiative (WASI) –Tim Johnson, Exec. Dir.

WASI is non-profit partnership between producers, environmental groups, government agencies, and university researchers, formally created in 2000. WASI identified five priority issues for producers: baseline data collection, manure & nutrient management, air quality and odor, and soil conservation practices. WASI's activities during 2005 total around 8 million dollars spent on inventorying research projects on priority issues, developing a communications plan, hosting an air quality conference, and contributing to the Buffer Initiative and Phosphorus Index. Johnson emphasized that real-world data collection is difficult and is an ongoing process. He also pointed out that trying to solve any one problem leads to many tradeoffs, and producer timelines are complex.

Discussion:

- € WASI is now getting to the point where they can begin making recommendations, as some of the partner projects begin producing tangible results. WASI's recommendations will be more educational in nature rather than regulatory. They are trying to determine what strategies need to be implemented to produce the needed changes on the land.
- € Outreach: If we can have an impact with the 20% of producers who are producing 80% of the product, that can be very effective. However, reaching the other 80%, including some who may be bad actors can be a challenge. Because producers learn from their neighbors, holding neighbor meetings can be very effective.
- € Task Force members pointed out that many research efforts are underway concurrent with proposed regulatory revisions, and asked whether such research should be completed before new state regulations are considered. Johnson felt that many of the regulatory changes being considered are not overly restrictive to producers and could be useful tools for producers. He pointed out that we will never have complete research answers--at some point we need to move ahead while using an adaptive management structure so that we can make modifications as more information comes to light.

Manure Management Research at Pioneer Farm – Chris Baxter, UW-Platteville

See handout: *WASI: Pioneer Farm Research Summary*

- € Monitoring work underway at Pioneer Farm related to manure management and watershed-scale runoff losses includes analysis of: the amount and type of manure applied, method and timing of application, single events and annual loads, and correlation with the Phosphorus Index. Pioneer Farm has 13 sites total, using a variety of paired watersheds, subwatershed areas, and single-use watersheds. Baxter presented data on the impact of winter manure applications on increasing phosphorus concentrations. However, he noted that some sites without manure applied can also have high P loads, likely due to high sediment loads. Planned manure applications for upcoming 2005-2006 season will compare surface application versus incorporation, solid & liquid applications, amount and type of manure applied, and the effect of those applications.
- € Key points: controlling just one factor (i.e. manure applications) may not have a large impact on runoff losses; must consider the whole system and manage risks accordingly; a “critical mass” of data is needed before we can quantify the risks or the effectiveness of BMPs.
- € Pioneer Farm is also evaluating composting and mechanical solids separation. Objective is to provide practical information to producers and regulatory personnel. Described separation efficiency for solids, nitrogen, phosphorus and potassium from dairy slurry and pointed out that only 10% separation occurred for N, P, and K only (i.e. most of the nutrients remain in the liquid portion); but about 40% separation is achieved for solids, producing a good pathogen-free bedding material. Researchers are also examining waste treatment strips, gaseous losses, economic analysis of solid separation as a BMP, and low-cost alternatives to compost pad construction.

Discussion

- € Hunt clarified how data is equalized from different fields with different characteristics (e.g. slope) to illustrate concentrations per unit area and total loads.
- € Solids separators- Pioneer Farm is looking into whether separators are economically viable for smaller operations. There are several varieties; the lower-priced models are around \$20,000 to \$30,000; operating costs have not yet been determined. They’re trying to look at efficiency and affordability of these tools and how the product can be managed. Also discussed the potential to irrigate the liquid portion on a growing crop—would require some additional treatment to do so. Separator produces a pretty dry solid product that does compost well; needs to be managed correctly to get a dry bedding material out of it.
- € Gaseous emissions—looking to create easy benchmarks for farmers to quantify odor and emissions.

Risk & On-Farm Manure Management—Tom Hunt, UW-Platteville

- € Pioneer Farm looks at accountability in the long run—looking for demonstrable water quality improvements. Everything they do at Pioneer Farm is iterative and adaptive; it’s a whole-system approach. They try to be realistic about the outcomes they can produce.
- € Effective manure management is managing risk to assure a desirable outcome, by knowing and understanding the points of vulnerability, all the potential outcomes, the probability of occurrence, cost of an undesirable outcome, and behavior and values. To prioritize risks, consider the probability of an event happening and the potential impact of that event. Zero risk is not attainable.
- € It can be difficult to evaluate effectiveness of BMPs at field and watershed scales because of high variability in weather and site conditions, time lags to see responses to change in management, sparse implementation of BMPs, lack of long-term studies, etc.
- € Need 5-10 year studies because of large scale (farm-scale) patterns and trends. In shorter time frames, we can parameterize and frame issues, but we need to understand the broader, long-term trends too.
- € Discussed risk management communication and noted that the sociology of participation is being studied as well.
- € Need to level the playing field while recognizing flexibility needs; regulatory methods can address this.
- € Certain farm practices that have changed in recent years have had some adverse impacts—returning to basic conservation practices can take us a long way. Conservation is a practice-centric concept—if you’re doing a practice to conserve, you’re a conservationist—it’s not ideological.

Development and Validation of the Wisconsin Phosphorus Index (PI)—Larry Bundy

See handout of PPT slides: *Development and Validation of the Wisconsin Phosphorus Index*

- € The PI is a planning tool to assess the effects of field management practices on the relative risk of phosphorus delivery to surface water from that field. It is one option to use in preparing P-based Nutrient Management Plans, and is an integral part of SNAP-Plus planning software. The goals of creating the PI include: using information that is readily available to producers and planners (such as soil test, type of crops and tillage, etc.); basing it on the best available science, and directing users to alternatives to improve management and reduce losses. The PI estimates total annual P delivery from any given field to the nearest surface water. It considers sediment-bound P, dissolved P, and single event losses from surface applications of manure/fertilizer. It then multiplies these by a delivery ratio, and that results in the PI value.

- € In estimating risk of acute loss, the PI considers variables of season, soil type, slope, surface roughness. Acute losses increase with greater application rates; winter losses increase with increasing slope and decrease with higher soil surface roughness. PI assumes the worst case for each season. Spring is the lowest risk season.
- € Research for PI is based on soil characterizations, simulated rainfall runoff trials, and natural runoff measurements. See handout for sources of further information.
- € Validation of the PI was done through measuring actual P losses from edge of field and comparing those values to PI predictions. Field runoff data was obtained from Discovery Farms, Pioneer Farms, etc. The validation process used a long time frame and many fields under a wide range of conditions and practices. Results show a close correlation between predicted values and actual values. Bundy noted that comparisons of soil test P to actual losses does not show a good correlation—that is why soil test P is not used for assessing P transport. However, soil test P is very important as one component of the PI.

Discussion:

- € There are about 700 soil series mapped in WI, and so far we have research on only a sample of them. The PI used the most common soil groupings (each grouping containing several soil series) to get a representative selection of groups for the state.
- € Why does NRCS rely on soil test P levels in 590? In 590 soil test P is one of the two alternatives that can be used (the other is the PI). The soil test P approach is a method that can be used to determine whether additional P can be applied as a fertilizer or not, and is often used for non-livestock operations. It can be used as a relatively simple tool for planning. For more complex situations like livestock farms where manure is applied, the PI is a superior tool to use. At the time that 590 was created, most states did not have a functioning PI, so they did suggest use of soil test P as the best tool at that time.
- € How well do small-plot simulated rainfall events and natural runoff events parallel one another? The actual value for P loss is different between the two; however, they parallel one another in the direction that practices impact P losses (e.g., if a BMP results in reduced runoff during simulated rainfall events, it also reduces runoff during natural events). The small plot research results have been validated through accuracy comparisons at the larger field scale with relatively good results.

Wisconsin Buffer Initiative (WBI): Preliminary findings and recommendations – Pete Nowak

See handout of PPT slides: *Wisconsin Buffer Initiative: Preliminary findings and recommendations*

- € Charge: Based on best available science, where across the diverse Wisconsin agricultural landscape would riparian buffers have the greatest probability of enhancing water quality? They determined what science is needed to address this issue, and then either found the data or created it. WBI will be finished with their work in Dec. 31, 2005.
- € Discussed the ‘Concept of Disproportionality’: a small proportion of any agricultural landscape disproportionately contributes to overall system degradation. Nowak encouraged the Manure Management Task Force to use the same principle to focus on determining which small percent of operators/operations are contributing the most to the problem. He pointed out that the documented runoff events constitute less than one percent of the landspreading events over a given year.

WBI focused on four research themes.

1. *Develop an adaptive management approach to riparian buffer technology.* Science is an open-ended process; we will never reach an end point. We have to move forward even when there’s a lot of uncertainty. But it’s important to have some sort of a feedback mechanism. Regulators need to recognize this necessity.
2. *Locating watersheds where buffer technology will be most beneficial.* WBI members made a political decision to focus on where buffers will do the most good, focusing on the streams that are mid range (just under the stream suitability threshold) to bring them up to the suitability level. WBI decided that third order stream watersheds were the most appropriate size, because they are manageable to local staff. There are approximately 1600 third order stream watersheds in Wisconsin.
In assessing responsiveness to buffers, WBI members came to consensus on three goals:
 - Improve stream water quality. To do this they predicted nutrient & sediment loads and identified sources that can’t be mitigated through buffers, and used these factors to determine load reduction potential.
 - Protect and enhance native biological communities. Focused on sediment-sensitive fish species as an indicator.
 - Sustain lake water quality. Focused on those waterways approaching the “tipping point”, just before they go hyper-eutrophic. WBI identified those lakes and will provide DNR with a lake list ranked 1-1600 on predicted response to buffer implementation.
3. *Determining fields where buffers will be beneficial.* Goal: Provide assistance and appropriate tools for local field staff. Used a 3-step process to begin implementing buffer systems in a sample watershed, involving gathering local data on current conservation practices, a subwatershed analysis to determine where to focus on areas of greatest vulnerability, and field-level nutrient and sediment assessment. Buffers are not implemented in the entire

subwatershed, only in critical areas within each subwatershed— 6-7%, in one example. SNAP-Plus is also used to determine fields needing alternative practices and explore whether existing management can be changed to meet goals—buffers are only one in a series of options that operators can choose from.

4. *Placement and configuration of buffer technology.* Simple “ribbon” buffers are not the most effective approach for water quality—need to modify existing criteria to incorporate the “contributing area” into design of a buffer “system”.

Conclusions:

- ⊘ Recommend moving forward with policy actions even though there is, and always will be, some scientific uncertainty.
- ⊘ The ranked list of watersheds makes funding a political decision supported through the process of civic science.
- ⊘ Most important tool is knowing where, when, and in which watersheds, farms, fields, and subfields remedial practices need to be applied, and where those approaches do NOT work.
- ⊘ Applying the lessons learned by WBI, the Manure Task Force needs to determine where/which farms need tools applied—don’t look for the silver bullet of technologies. Focus efforts on certain high-risk areas.

Discussion:

- ⊘ Acute versus chronic impacts—When addressing the contributing area rather than just the buffer, they determine whether to plan for 50 year storm, 100 year storm, etc. (WBI uses the PALMS model—a landscape model looking at surface evapotranspiration and infiltration, runoff events, from very small to large runoff events). This approach can be used to address some chronic as well as acute impacts. Buffers do play a role in preventing chronic events; however, management of the contributing areas is the best way to address acute events—can take less land out of production yet have a greater effect.
- ⊘ The Clean Water Act mandates protecting healthy ecosystems—aren’t buffers needed for habitat concerns? By removing the 30-foot buffer ribbon you may remove some habitat continuity. Nowak stressed that the WBI was charged with focusing only on where buffers would do the most good (greatest bang for the buck) relative to water quality, not biodiversity. Could use a similar process to determine where buffers are most effective for biodiversity needs.
- ⊘ Would buffers be harvested? Yes, producers would be allowed to harvest the contributing area buffer. In the whole system process, the upland practices will also be modified to reduce runoff—it is a combined approach since buffers can’t do it all. The solutions contain a mix of things needed for success.
- ⊘ Implementation: do we have the knowledge needed to implement this well on the priority areas, or is yet more research needed before implementing? Needs new dollars so that we don’t take money away from other county needs. Rather than directing more money toward research, Nowak feels strongly that funds need to go straight to implementation since that is how we will see what works and how we can move ahead better.
- ⊘ A task force member expressed support for the approach of improving lakes on the downslide rather than putting money into the worst of the worst, where not as much improvement is likely. Need to recognize that the best approach may not mesh with current policy, and consider adjusting policy accordingly (for example, that approach doesn’t fit with CREP policy, which is not based on water quality; TMDLs may be another area to examine).

Matrix –Group discussion on second half of the matrix

Preliminary Discussion

- ⊘ Members questioned whether the Task Force had moved from its broad-based starting point toward specific goals agreed on by the group. Rude indicated that the group is still working from the same original mission and goal: to examine an array of tools and options to reduce the incidence of pollution to WI waters, and provide recommendations to the agency Secretaries. Further refining of the goals at this point may not be most productive way to spend the limited time allotted. Suggested that once we get the preliminary recommendations listed, we will then need to determine which ones are best suited to our goals, and can discuss at that point whether the focus is too broad or too narrow.
- ⊘ Co-chairs have discussed how to synthesize our conversation so far. We haven’t yet zeroed into the specific problem areas.
- ⊘ Clarified that the group is focusing on both acute and chronic impacts. To keep things manageable, members suggested creating different sets of recommendations for addressing each, or having some method of indicating which approaches address acute, chronic, or both.

Revisited Categories from Previous Discussions/New Categories

- ⊘ *Digester research*—Group decided to return digesters to the table since they do address pathogens as a water quality issue.
- ⊘ *Information & Education*—Add development of recommendations on how communication exchanges could take place regarding new innovations for responding to emergencies. Also add dissemination of information about source reduction—reducing phosphorus in feed, separating liquids from solids, reducing water in the system.

- € Add a category for *Source Reduction*—reducing phosphorus in feed, separating liquids from solids, reducing water in the system. Possibly think about ways to make these more profitable. Could also add this topic to educational/outreach (above).
- € Add a category for *Funding Mechanisms*. Economic sticking points seem to be a central issue, and maybe the Task Force needs to address these rather than leaving it up to legislature.

Data Collection

Improve environmental data collection related to manure incidents (develop protocols, share responsibilities)

- € Need systematic collection procedure for runoff events so that commonalities of the events can be determined, without becoming too costly or prohibitive. This is not to take the place of action that needs to be taken now, but should be used as part of an adaptive management approach to supplement our knowledge in years to come and inform future management recommendations. Some members noted that it is also intrinsically related to enforcement. Agency staff will put together some data requirements and procedures as a draft for Task Force to address and return it to the Task Force before the next meeting—get Gorder, Erb, Hanson’s input before sending to group.
- € Also need common process for how investigations are done. Staff will use currently existing, related protocols to create an investigation protocol template for manure runoff events (use DATCP protocols on investigating pesticide spills/incidents; DNR Animal Waste Investigators Handbook).
- € Monitoring for chronic impacts: Land & Water Conservation Plans have a monitoring component. Could some volunteer monitoring be used to study chronic impacts?

Improve data collection/research related to practices designed to avoid incidents

- € There is a phenomenal amount of research going on—we should include in our recommendations an acknowledgement of current research, encourage the use of it, and encourage continued sharing between agencies to synthesize research.
- € During the investigation and data collection process, consider collecting social information on why producers do or do not implement practices or corrective actions, barriers to implementation, etc. (this could also be added to the research categories).

Monitoring

- € Find a way to help or coordinate the counties to provide direction for them.
- € The purpose needs to be monitoring for water quality outcomes, connecting what’s happening on the land to water quality in streams. The group distinguished between research monitoring (for instance, to develop BMPs or determine how well they are working), compliance monitoring during an event, and ambient monitoring to determine the state of water quality.
- € What is the role of volunteer monitoring and what can that data be used for; can it be used for regulatory purposes? Volunteers are great for ambient monitoring. Their efforts can be focused on areas of highest risk if those are most helpful. An example was given where DNR helped set up volunteer monitoring in Manitowoc Co. to focus on problem areas, which is now working well. However, it is difficult to have volunteers monitor runoff events since these incidents happen randomly.
- € DNR’s Water Division has a Water Monitoring Strategy—its Executive Summary can be attached to the minutes.

Planning

Develop planning considerations to reduce risks (whole farm plan, Environmental Management Systems (EMS))

- € The framework for EMS has been around a long time; its goal is to prevent problems by using planning above and beyond that done with other types of planning tools. The farmer sets out specific environmental goals and then the EMS helps them to plan for achieving those goals; it also helps make operators aware of what their problem areas could be, and how to prevent and/or address them, and includes an emergency response plan. EMS audits and evaluations are done by external parties (for manure applicators the insurance industry does the audits). An operation’s EMS improves each year to increase environmental performance. Most non-agricultural industries use an ISO 14001, equivalent to an EMS for agriculture.
- € EMS and Green Tier: EMS can fit well with the Green Tier approach or the two can be used separately—both help reduce risk and encourage farmers to go above and beyond requirements. The group acknowledged that Green Tier programs are generally targeted for operations covered by a permit, while EMS can be used for any size operation. There has been some research by Gary Jackson on the role of EMS. In *certain targeted critical areas*, we might recommend whole farm plans, EMS, or nutrient management plans...the group seemed in general agreement that this may be a good approach but an incentive mechanism would need to be developed.
- € Carrot vs. Stick approach to encouraging EMS: Producers noted that there needs to be a significant carrot or the EMS won’t get done; it’s a lengthy process—not a small undertaking. Could use of an EMS help protect the good actors who

have an accidental event? Some possible carrots discussed include reduced liability, financial/technical assistance, various types of financing mechanisms, Green Tier or other green stamp programs to designate a farm as a high-quality performer (though one producer noted that the market isn't there yet to reap financial benefits from marketing your operation as a Green Tier operation). Regulatory relief was also discussed as a carrot but this would only apply to the small percent that are regulated (though smaller operations that have a discharge can still incur enforcement & costs). If you compare the cost of preparing a preventative EMS to cleaning up a fish kill (\$25-50,000), that should be an incentive. Staff will draft incentives for creating an EMS or superior performance plan (including an Emergency Response Plan), examining potential incentives ranging from technical/financial assistance that could be redirected/leveraged, reduced liability (insurance or other mechanisms), regulatory relief or adaptation, discretionary authority. Bring it back to the Task Force to consider. Could possibly be tested in a certain region as a pilot.

- € We need to address how we are going to pay for these recommendations. If more rules are created, we need to create funds to implement them. The dairy industry will go out of business—some producers say if they have to spend money on structures, etc, those farmers are going to shut down or leave.
- € Enforcement and penalties: DNR's financial penalties for negligent acts are assessed depending on how the responsible party manages their manure before the event and responds during/after the event. DNR has guidance on staff procedures for analyzing the appropriate level of enforcement. Producers are skeptical of taking DNR's word on that. DOJ only prosecutes if they feel it is justified; the odds of getting penalized in an unjust way are very tiny. Many farmers don't see their neighbors receiving any enforcement action even though they have runoff events; so it's hard to make a carrot that works. It is unlikely that an operator following an EMS would receive a referral to DOJ. It was noted that citizens can also take these issues to court, not just DNR.
- € There were questions about who has authority during an emergency. An emergency plan can address smaller incidents, but larger events may need additional expertise. If the situation is too big then the DNR and the operator will work together to determine how to best handle it. DNR must be notified as part of the emergency response plan. If the impact is going beyond the operator's property and impacting others' properties, then others need to become involved.
- € A nutrient management plan along with an EMS can prevent most chronic events. It was noted that currently, comprehensive nutrient management plans are not held by many operations (200-300 total in WI; and CAFOs have equivalent requirements).

Target critical lands and operation for practices (TMDL, small-scale watershed plan)

- € *TMDLs*—Recognized the need for TMDLs as a planning tool for nutrient management. TMDLs are required for impaired watersheds.

Emergency management

Review protocols (increase agency coordination)

Already discussed at a previous meeting. Stevenson/VandenBrook can supply information.

Emergency storage and disposal options (manure storage bank, CRP lands)

- € Erb recommends changing the text in the "Feasibility/Acceptability" column from "long term" to "short term".
- € May want to look at certain ordinances that say storage facilities have to be closed after a certain time period—instead, if they meet current specifications let them remain available for emergency storage. Most ordinances have variance procedures that should make this a straightforward process. For emergency use of pits that would've been closed, consider compensation for the owner.
- € There is an existing list of municipal sewage treatment plants (statewide list available through Pierre Grienier, Appleton Wastewater Treatment Plant); they could potentially take manure during an emergency. However, need to be cautious that their wasteload allocations aren't overwhelmed.
- € Create county lists of operations with storage or other potential emergency storage options that could be part of a response plan.
- € Biosecurity concerns would need to be addressed with several of the above options. Questions arise on how to transport manure from problem site to storage, whose land it is spread on afterwards, and liability issues. For permitted operations consider the transfer of responsibility for the manure.
- € CRP lands as application options for emergency—it's against the rules to spread on CRP—it's been checked with the Feds and not currently an option unless Fed changes their position (not all agreed this would be a good idea to use CRP land). We could still put it on recommendations if group feels appropriate.
- € Several members felt that encouraging private arrangements as part of each operator's EMS was the best approach. Plan ahead so each farmer knows which options are available. Most storage facilities are near capacity—how would the receiving farmer dispose of the extra material? Moving problem manure to another operator's storage facility has narrow

use from a practical standpoint.

Emergency response plan

- € In the “Effectiveness” column, change text from “much less effective” to “somewhat less effective” for land application areas.
- € See some related discussion above.

Expand emergency management practices (polymers, barriers)

- € The private sector hasn’t developed all the needed tools yet. DNR should leave the door open to allowing use of these tools if they’re deemed effective, and agency staff should be willing to consider trying them. Need better communication with local communities and the agricultural sector about what DNR has tried with new emergency response technologies and how it worked (add to I&E category: develop recommendations on how communication exchanges could take place regarding new innovations for responding to emergencies). Polymers are beginning to become more available commercially.

Regulation

Required practices (winter spreading restrictions and prohibitions, conservation planning)

- € Operations with fewer than 1000 animal units but that meet certain criteria can be designated as a CAFO under current NR 243. DNR is considering developing a general permit which could perhaps be used for this type of situation.
- € ATCP 50/51 have nutrient management requirements and winter spreading restrictions based on NRCS 590.
- € NR 243 has additional winter spreading restrictions that go beyond NRCS 590.
- € Local ordinances may also incorporate NRCS 590.

Mandatory storage capacity

- € Under the proposed revisions for NR 243 all currently permitted operations are required to have 6 months storage for liquid. Some members questioned how effective mandatory storage capacity will be in solving runoff problems. Pointed out that even if everyone had 6 months storage it still wouldn’t prevent all events; however, it can prevent acute events when there’s storage available during a critical period. If an operation doesn’t have storage, it’s forced to spread at undesirable times. If you do have storage, you have options. The group recognized that storing for 6 months can prevent some problems (spreading at undesirable times) but can also cause problems (spreading very large volumes in the spring). Task Force members should stay abreast of further opportunities for commenting on NR 243.
- € Mandating a minimum length of storage isn’t really appropriate; from a program management aspect we design for a certain time frame (e.g. 5 year permit term). Within that time frame, there are a lot of changes in each operation that create variables. To address that, proposed NR 243 does contain an expansion allowance –6 months must be maintained at all times except for the expansion allowance (to qualify, operations must have a good record and have emergency options). Some members believe that mandating storage capacity will cause problems, and suggested using guidelines for determining the amount of storage that may be appropriate for an operation, but not mandating minimum days. One producer clarified that he is not opposed to storage, just mandatory storage—there are times that storage is appropriate.
- € The question comes down to management—some farms have a safe land base for spreading, others do not. So the question should be does each farmer have the resources to adequately manage their manure in an environmentally sound manner—does each farmer have the tools, and if not, determine what tools need to be put into place. Use a performance-based approach rather than a specific technological option.
- € Economics: Each time we keep coming back to economic sticking points as a central issue, and maybe we do need to address that rather than leaving it up to legislature. (Add “Funding Mechanisms” to our matrix.) Discussed the possibility of passing on increased cost to the consumer through a surcharge per gallon of milk. DATCP staff were asked to determine whether there is a possibility of a \$2 surcharge on the price of a gallon of milk to help dairy farmers cover the costs of complying with regulations, or other ways to pass on the costs to the consumer. A voluntary green charge for milk is another option, but producers were skeptical about market demand for that type of program.
- € Others countered by stating that the party causing the environmental harm—in this case farmers—is who should bear the cost. The farmer has to accept some level of responsibility for causing harm to public resources.
- € If fewer than half of the state’s cows are on farms with nutrient management plans (NMP), how do we get the rest of them to have an NMP so we can address things farm by farm? Perhaps it could be done through WPDES permits for medium sized CAFOs, or through other means. As of 2008, all crop producers must have an NMP, though they cannot be compelled to do that unless first offered cost sharing. So there is a framework in place but there still is a significant stumbling block. Discussed whether there should NMPs should be mandatory and if so, how we might require it, provide incentives, fund it. Or, it could be required without funding (are there similar requirements without funding for other industries?) Staff assignment: Lay out options for ways to get NMPs into place.

- € Could go on record supporting funding cost sharing adequately for both nutrient management planning and implementation of those plans (currently there is not sufficient cost sharing for implementing the plan long-term), but recognize that the level of effort to implement plans will vary by farm and by region.

Manure haulers/applicators/landowners (certification, application procedures)

- € The majority of haulers in Wisconsin are hauling for CAFOs and are therefore already regulated. Contract haulers are involved with approximately 1/3 of the manure in the state, but that is declining somewhat as CAFOs are moving toward hauling their own. Of the 100 firms in the state, just under half of them have been certified.
- € Most small farms are hauling their own. Group discussed providing training for self-haulers. There are some current programs that could be adapted for self-haulers. Most farmers learn how to use their equipment properly, but they may not be familiar with different handling and application needs for liquids versus solids. We could advocate for specifically trying to educate individual operators on responsible manure hauling. One suggestion was creating a statewide permitting program (similar to Dane County's manure storage fee) required for daily haulers, but as an incentive offer a waiver of that fee to farmers who attend a workshop before applying for a permit, to address siting, nutrient management, emergency spills, etc.
- € Applicators are already regulated in two other states. Both IL and IA require hauling certification for any operations with over 300 animal units. In IA all for-hire haulers are regulated; in IL there is a voluntary program for for-hire haulers similar to Wisconsin's.
- € Should commercial haulers be allowed to do business without any training? Would like to see all applicators have a level playing field with a certain level of certification; learn a whole suite of skills dealing with liquid versus solid manure. Others expressed that they wouldn't want to move to a mandated program (unless perhaps for those who handle over a certain volume of manure), but information on application should be made available to everyone—including individual operators. Staff summarize how other states have defined "commercial hauler" (specific trigger volume, or ownership of equipment, etc.), what they're doing for certification, and associated costs (Erb can contribute to this).
- € Certified applicators have a set protocol to use for notification and investigation of runoff events (investigations done by Professional Nutrient Applicators Assoc. of WI); however those guidelines can't be used for individual farmers because there is no overriding organization to conduct those investigations.
- € If regulated, some preferred it be regulated through DATCP. Could look at how pesticides are structured based on environmental risk. Such a program costs a lot of money—Iowa's program costs a quarter of a million dollars.

Compensation programs (wells)

- € Right now Wisconsin's Drinking & Groundwater program has a well reimbursement program that covers chemical contamination but not bacterial contamination (and thus excludes manure contamination)—this is a gap in the current program. Recommend that bacteria be included, which would likely require rule amendment and will also require funding. Agency staff can compile some options for filling this gap, as well as determining what the current source of funding for the well program is.
- € Responsible parties for well compensation: Many people have to build new wells because of manure contamination. If there is an identified responsible party, that responsible party is required to make compensation. Often with manure it's hard to pinpoint the responsible party. There are also some income limits—geared toward lower income parties.
- € Under the current program, reimbursement is not required if the impacted wells were not compliant with code at the time of the impact. However, a large percentage of rural wells wouldn't pass the bacteria standard—in the case of an acute event, well compensation should be available even for wells that don't meet code. Need to define the circumstances under which compensation is due, and use the investigation process to ascertain that the source was an off-site source. Especially if that source was operating under DNR allowed rules, there would be a good case for compensation.

Record keeping—Go on record as being in favor of good record keeping.

Roles & responsibilities: federal, state, local (coordination)—Discussed at previous meeting.

Other

Short-term storage approaches (headland stacking, mixing solids/liquids)—Did not address directly (though there may have been related discussion in the September minutes).

Responses to Action Items for November 21st MMTF meeting

Item requested	Provided with mailing	Provided at November
List of preliminary findings and recommendations prepared by DNR and DATCP	J	
DNR and DATCP Investigation protocols		J
Agency papers on limited enforcement and superior performance plan		J
Summary of state regulation of manure hauling	J	
DNR Drinking & Groundwater staff recommendations		J
Milk surcharge	J	
NMP Implementation		J
Executive Summary of DNR's Water Monitoring Strategy		J

DATCP and DNR DRAFT
Proposed Findings and Recommendations
Manure Management Task Force
November 11, 2005

General Considerations

Land spreading is the most common method farmers use to dispose of their manure. It is effective in recycling manure, and is fundamental to sound farming. Proper land application requires balancing available land base with animal numbers. However, land application of manure, particularly in winter months, has resulted in acute runoff incidents. The Wisconsin Department of Natural Resources documented 52 runoff events from July 1, 2004 through June 30, 2005 (see Appendix 1).

Manure runoff from these events entered our lakes and rivers and killed fish. In other cases, land-applied manure found its way into private wells and contaminated drinking water. As a response to those runoff events, the Secretaries of the Department of Agriculture, Trade, and Consumer Protection (DATCP) and the Department of Natural Resources (DNR) convened the Manure Management Task Force to identify solutions to these problems.

It is important to distinguish manure runoff incidents from the chronic delivery of nutrients and sediment from fields. Key factors that contribute to acute events include spreading of liquid manure on frozen or snow covered-ground, manure applications on saturated ground, and spreading manure immediately prior to rain events or snow melts. Different factors such as cropping practices and the volume of manure applied affect chronic delivery of nutrients and sediment.

There are a range of actions we can take to address acute runoff incidents. In the near term, we can pursue actions such as cost-sharing for nutrient management plans and regulation of manure spreading. Other actions, however, require taking a longer view to conduct research and develop new technologies. There are actions such as nutrient management planning that can be effective in reducing both chronic and acute risks. Nutrient management plans are the best available and most acceptable practice to address manure runoff issues including those related to winter spreading.

In considering alternatives and options, it is critical to strike a balance that protects the environment and the public interests while allowing a climate favorable for our livestock industry to grow and prosper. This requires that we understand the effectiveness, economic impact and feasibility of different proposals. Engaging the agricultural community and the affected public is vital to identifying appropriate solutions and making progress in addressing this issue.

Recommendations

- € DATCP and DNR should play a lead role in cooperatively identifying and pursuing short and long-term actions to reduce the risks of manure runoff incidents.

- ∉ DATCP and DNR should focus on actions that take advantage of the sustainable practice of land application of manure.
- ∉ Research and other approaches should provide maximum benefits by reducing acute runoff risks while effectively managing risks of chronic delivery of nutrients.
- ∉ DATCP and DNR should recognize that nutrient management plans are the best available and most acceptable practice to reduce runoff risks related to manure applications.
- ∉ DATCP and DNR should consider actions that are effective, economical, feasible, and acceptable.
- ∉ Efforts should be made to engage the private and public sector in developing and implementing solutions. The agricultural community should become involved in identifying and taking ownership of solutions.

Research, Data Collection, and Monitoring

Ongoing research is essential to finding workable solutions to the problem of manure runoff events. Our leading researchers at the University of Wisconsin, Discovery Farms and Pioneer Farms are conducting experimental and on-farm research to better understand manure transport and other runoff from fields. We are not adequately documenting current research activities and research needs. There is need for state leadership to coordinate research activities. Our state research agenda could be more focused on key issues related to manure runoff incidents.

Research can take various forms. It may validate specific practices that reduce runoff risks or minimize the impact of runoff events. It can look at new methods and technologies for handling and treating manure. Some technologies such as solid separation and incineration offer promise. Others such as manure digestion provide related benefits by harnessing energy from manure while controlling odor. Social scientists can help clarify how we can most effectively communicate messages about manure management to farm audiences, and the value of different incentives in changing farmer behavior. Research may also include improving our understanding of funding mechanisms to pay for valuable practices such as nutrient management plans. Research can fill key gaps in our knowledge about manure runoff incidents including the role of tile lines in transporting manure.

It is important to improve the way state agencies collect, track and report data related to manure runoff events. With a more systematic approach to data collection, we would have better information to understand and evaluate runoff events. DATCP and DNR could collaborate better to investigate these events, making use of their different expertise. Also there is a need to create a compilation mechanism such as an annual summary of the data.

Monitoring is related to data collection, and is performed by agencies and citizen volunteers. Monitoring can take different forms, and can be used to develop BMPs or determine their effectiveness, to monitor compliance during an event, and evaluate ambient water quality in lakes and rivers.

Recommendations

- ⊄ The state needs to acknowledge the value of research, promote the sharing and synthesis of research, identify areas of need, and direct adequate resources to meet these needs. Research entities like Discovery Farms, Pioneer Farms, and the University of Wisconsin are key to these efforts and should be provided adequate funding to continue this necessary work.
- ⊄ The state needs an umbrella group similar to the Wisconsin Agricultural Stewardship Initiative, Fertilizer Research Council or Groundwater Coordinating Council to develop and maintain a catalogue of research activity and needs, and serve as a clearinghouse to coordinate the interpretation of research findings.
- ⊄ DATCP and DNR should play a more active role in coordinating research to address key issues related to manure runoff incidents, provide leadership in identifying and supporting future research, and provide direction in setting research priorities.
- ⊄ Research activities should be prioritized, and reflect identified long- and short-term goals.
- ⊄ Research activity should reflect the full range of needs, and include activities that more effectively translate research into policy, improve our understanding of what works to change farmer behavior, explore ways to reduce water usage on farms, collect more information on transportation issues such as manure hauling costs, evaluate BMP effectiveness including pathogen control, and shed light on the role of tile systems in transporting manure.
- ⊄ Research efforts should encompass a commitment to develop and test new technology that includes solids separation and reduced water usage in dairy operations.
- ⊄ Research efforts may assist in farm-level targeting of practices, using approaches similar to Wisconsin Buffer Initiative, to provide cost-effective approaches to managing nutrient runoff.
- ⊄ DNR should develop a methodology for evaluating local and statewide economic costs resulting from manure runoff events, including public trust values of lost resource use for citizens and small business losses.
- ⊄ Research efforts should continue to examine the environmental impacts of manure runoff events (including impacts from phosphorous and other nutrients, pathogens, ammonia, biochemical oxygen demand, and effects on groundwater) and should study the effectiveness of practices in protecting water quality.
- ⊄ DATCP and DNR must improve data collection, tracking and reporting of runoff events. They should evaluate the benefits of cooperation in accomplishing these actions.
- ⊄ DATCP and DNR should explore the potential for using a common process for conducting investigations of manure runoff incidents, and consider using related protocols (e.g. DATCP protocols on investigating pesticide spills/incidents or DNR's Animal Waste Investigators Handbook) as models for investigation.
- ⊄ DATCP and DNR should recognize the importance of social data, and work with the agricultural community, university experts and others to improve the collection of this information. Key areas of improvement include a better understanding of why producers implement practices or corrective actions, what barriers stand in the way of implementing new practices, and what the most

effective delivery methods are to communicate important messages to the agricultural community.

- € DATCP and DNR should work with local governments, non-profit organizations and others to improve the quality of monitoring activities, including citizen monitoring during and prior to snow melts.

Alternative systems and management

Research can help us find new ways to handle and manage manure. By reducing water usage on farms, we can reduce the volume of manure that must be spread on land. We can also look to other states for models for reducing risks. States such as Oregon have developed a spreading advisory tool farmers can use to identify and avoid high risk conditions for spreading manure. We need to evaluate and advance technologies with promise. There may be a place for manure storage bladders to handle any overflow from permanent storage structures. For proven systems and established practices, we need to look at outreach and education to communicate information. For example, more farmers may consider composting if they learn more about the process, benefits, and costs.

There are distinct benefits of focusing research and development on small scale technologies that are feasible for individual farms (e.g. filter-presses). This approach avoids the complexities of regional approaches such as transportation and pathogen concerns. There is room for regional solutions; however, it appears more productive to focus on small, on-site technologies at this time.

Recommendations

- € DATCP and DNR should work with UWEX and others to pursue a manure spreading advisory system that may take the form of a web-based risk assessment tool to warn farmers about specific weather-related hazards such as predicted rain events. This tool should be developed and implemented with a full understanding of its limitations (e.g. farmers still need to use common sense).
- € DATCP and DNR should work with UWEX and others to pursue a statewide notification program to alert farmers concerning high risk spreading conditions such as melt periods and dry weather. Different media including radio broadcasts (including daily market reports), websites, and email could be used for making notifications.
- € DATCP and DNR should work with others to remove barriers to new approaches by more clearly identifying transportation costs and management issues, improving the economic viability of on-site digesters for individual farms, and improving the opportunities for marketing compost.
- € The state should invest in research and other programs that focus on small-scale, on-farm approaches such as solid separation, storage bladders, and reduced on-farm water usage.
- € The state should promote proven systems and established practices such as composting and grazing that incorporate less risky, manure handling methods.

Planning

Conservation and nutrient management plans are a specialized form of farm planning. The next section has a further discussion on incentives for these forms of planning. There are more comprehensive approaches to farm planning that include whole farm plans and Environmental Management Systems (EMS). At this scale, these plans enable farmers to make better decisions because they can evaluate relevant information about available resources, alternative solutions, and potential impacts. An EMS is a systematic approach to identify, correct and monitor the environmental performance of a livestock enterprise. An EMS involves a continuous cycle of risk assessment, action planning, implementation, review and improvement to fully integrate environmental responsibility into the business of farming. External audits verify that farmers are doing what they identified in their EMS plans.

Farm planning can reduce a range of environmental risks, including those related to manure runoff incidents. When teamed with a nutrient management plan, an EMS offers a powerful combination to prevent acute and chronic runoff events. State programs can stimulate the use of planning tools such as the EMS approach. For example, an EMS is a good fit with the *Green Tier* program and its emphasis on higher levels of environmental performance. Other incentives need to be considered. State programs might confer a degree of liability protection on a farmer who follows an EMS.

The state develops watershed and other plans to identify water quality concerns in particular areas. State plans that identify Total Maximum Daily Loads (TMDLs), which are required for impaired watersheds, can aid in efforts to target water quality protection.

Recommendations

- € DATCP and DNR should work with the private sector to support and expand the use of environmental management systems and other comprehensive planning tools. DNR can expand its support of EMSs through the *Green Tier* Program.
- € DATCP and DNR should work with others to promote the planning and other mechanisms that result in reduced spreading of manure in high risk situations.
- € DATCP and DNR should provide incentives for the range of planning activities including funding for nutrient management plans and limited enforcement for any farmer who adopts and follows an EMS and takes other actions to reduce the risk of runoff events.
- € DATCP and DNR should work with the private sector to develop incentives such as green labels to encourage EMSs.
- € The agencies should consider targeting planning incentives to certain critical areas (e.g. an impaired watershed with TMDL concerns)

Monetary and non-monetary incentives

Incentives are an accepted tool to encourage farmers to adopt conservation practices and make positive changes in management. Existing federal and state cost-share dollars are inadequate to meet the need for managing land application of manure. Of specific concern, cost-sharing is required for enforcing nutrient management and other agricultural performance standards on existing farms. While incentives vary in their

effectiveness, they merit serious consideration in developing state responses to manure runoff incidents.

Under current administrative code, all operations must have nutrient management plans by 2008 if cost-sharing has been offered. By making cost-share dollars available for nutrient management on livestock and poultry operations, we can increase the number of plans used by farmers, and reduce water quality risks related to land-applied manure. DATCP has targeted grant funds to cost-share nutrient management plans where there have been manure incidents and the farms are not required to have plans. When combined with a conservation plan that identifies high risk fields for winter spreading, a nutrient management plan has enhanced power to reduce acute risks. In considering funding for nutrient management, additional revenue sources should be identified.

Given the shrinking budgets at all levels of government, there is merit in considering non-monetary incentives. The *Green Tier* program provides non-monetary incentives for DNR-permitted entities including livestock operations to adopt higher levels of environmental performance.

The protection of limited enforcement is an incentive that merits further consideration. Properly designed, limited enforcement could serve as an inducement for many farmers to adopt key practices such as nutrient management. Both agriculture and environmental representatives indicated a willingness to pursue this concept provided key questions are resolved. Details that must be worked out include the specific conditions that would trigger this protection. What criteria regarding protective management practices must a farmer meet to be eligible for limited enforcement? What is the nature of the protection that will be afforded farmers? Should the level of the protection vary depending on the farmer's level of commitment? Is there merit in providing protection through an industry risk pool that helps eligible farmers pay for runoff-related damages? See related discussion papers analyzing this concept for more detail.

Recommendations

- ∄ DATCP and DNR should actively work to establish limited enforcement protection for farmers that meet standards for superior environmental performance. A regional pilot program should be established to develop, test and evaluate implementation protocols.
- ∄ DATCP and DNR should work with the agricultural community, environmental interests and others to increase funding by \$7-14 million for the implementation of nutrient management plans on livestock operations, building on the DATCP grant program as a model to target financial incentives. Funds should be targeted to areas or using approaches that will provide maximum benefit.
- ∄ DATCP and DNR should work with the agricultural community, environmental interests and others to identify new funding source(s) from farmers, consumer groups and/or industry groups to pay for (a) remediation of contaminated wells, habitat and other impacts of manure runoff events, (b) implementation of preventive measures, (c) related research. New funding sources may include segregated funds sources, similar to the Motorboat gas tax.

- € Insurance discounts and other incentive programs already in place should be more widely publicized through information and education efforts.
- € State and federal grant programs should reward farmers with high levels of environmental performance by awarding them additional points when they apply for cost-share grant funds.

Information and Education

Combined with research and field testing, information and education (I & E) can serve a valuable role in transferring information about new practices and technologies. This approach has a long tradition of acceptance in the agricultural community. The effectiveness of farmer education efforts can be increased by maintaining long-term relationships with farmers. For example, sustained relationships are a key to the long-term success of nutrient management. Farm group involvement through mentoring and other efforts has the potential to create a sense of ownership in the solutions to this problem.

Education efforts can also shed light on new opportunities such as grazing, manure sharing, and insurance discounts. In particular, they might be used to disseminate the growing body of information about source reduction—reducing phosphorus in feed, separating liquids from solids, reducing water in the system. Budget cuts have diminished statewide capacity to carry out outreach and education. Print materials and web-based delivery offer cost-effective options for communicating with farmers and other audiences, but web-based programs may reach a narrower audience.

Regular training is critical for those who apply manure. The training should be dynamic and current, including new components each year, rather than formal and repetitive. A statewide certification or licensing program has the advantage of ensuring full participation and consistency in training.

A well-rounded education effort includes outreach to the non-farm public. Public recognition programs such as River Friendly Farmer Awards acknowledges farmers for good performance and increase public awareness of farmers as good stewards.

Recommendations

- € DATCP and DNR should reaffirm the importance of I & E efforts, and work with a coalition of interested parties to identify key activities and secure adequate support for these activities.
- € I & E efforts should be enhanced by developing long-term relationships with farmers. New approaches should be considered such as a mentoring program that taps farmers who have already successfully implemented their nutrient management plans as a resource for other farmers.
- € I & E efforts should embrace innovative practices and technologies, including source reduction through reduction of phosphorus in feed, separation of liquids from manure solids, and reduction of water in the manure handling system.

- ⊄ I & E efforts should disseminate existing information more widely to promote manure brokering (exchange of manure), insurance discounts, grazing, and reduction of phosphorus in feed.
- ⊄ State agencies and UWEX should develop a formal training program related to manure hauling and management. This could be part of a mandatory licensing or certification program for professional manure haulers. Medium and large livestock operations might be required to participate in training while participation by others would be voluntary.
- ⊄ I & E efforts should be improved by making more effective use of print- and web-based materials. Improvements may include increasing the quantity and quality of material on manure management, developing informational materials on new research findings from the Discovery Farms and other sources, involving DATCP and DNR in the distribution of materials, using the web as appropriate but not relying on this mechanism, understanding the needs of the audience and using the most effective channels for communication, considering new avenues to deliver information such as milk inspectors.
- ⊄ Education and training of farmers should include a component that provides information to farmers about their local water resources, including significant resources.
- ⊄ I & E efforts need to reach the non-farm public and should include farm visits particularly for agency staff, public recognition programs, and urban pollution prevention.

Emergency management

Careful planning and compliance with best management practices can minimize manure runoff risks; however, these actions do not entirely eliminate the risk. Farming is subject to variables such as weather that farmers cannot always anticipate and control. Planning and other emergency management measures are necessary to respond to unforeseen events.

These measures could take the form of emergency storage and disposal options, emergency planning, and expanded practices specifically designed to manage emergencies. Options that involve the transportation and regional storage of manure raise issues involving bio-security, hauling costs, and liability. Public wastewater treatment facilities may be a resource in an emergency, but they have wasteload restrictions that might preclude their acceptance of manure. Use of CRP lands for emergency manure applications is not an option under current law. Farmers can use private arrangements with other farmers to transfer manure in emergencies. Private transactions would be facilitated by a list of farmers who were available to accept manure.

Emergency response plans allow farmers to plan in advance how they will respond in the event of a runoff incident or other emergency. Emergency response plans identify who the farmer will contact and what procedures the farmer will follow. In these plans, farmers need to consider what aspects of an incident they can manage, and when they need to secure assistance to manage conditions beyond their skills and resources.

Research can yield new practices and technologies to limit the impact of runoff events. It is important that we continue to evaluate new options, identify successful tools, and share proven technologies with farmers and others. Polymers have shown potential as an emergency management tool, and are becoming more available commercially.

Recommendations

- € DNR and DATCP should encourage the expanded use of emergency response plans by providing incentives for their adoption.
- € DATCP and DNR should engage the agricultural community and local governments in the task of developing and maintaining lists that identify private and public storage and treatment facilities that might accept manure in the event of an emergency.
- € DATCP and DNR should engage the agricultural community and local governments in the tasks of identifying and expanding emergency storage capacity. This might include regional storage facilities and options to use private storage facilities.
- € DNR and DATCP should work with the agricultural community and others to facilitate private arrangements among farmers to transfer manure in the event of emergencies.
- € The state should support research and development of new management and technological options, identifying successful tools and sharing proven approaches with farmers and others.

Regulation

Under the current state nonpoint law, most farms are entitled to cost-sharing if they are required to comply with nutrient management and other agricultural performance standards. Livestock operations over 1000 animal units are the exception; they are required to have nutrient management plans and meet other standards as a condition of their DNR permits issued under NR 243. State and local governments are proposing new regulations that will specifically address manure runoff incidents. Proposed changes to NR 243 will mandate storage for manure and restrict manure spreading during winter months. The proposed livestock facility siting rules (ATCP 51) require farmers to implement nutrient management plans. Both ATCP 51 and NR 243 include a requirement for emergency response plans for operations covered by these rules.

Several counties are proposing ordinances that specifically regulate winter spreading of manure. Local officials are considering specific provisions that:

1. restrict winter spreading in high risk areas identified by farmers in conservation plans,
2. limit the volume of manure that can be applied on frozen and snow-covered ground,
3. prohibit manure application near wells and other sensitive areas,
4. require conservation practices to reduce runoff risks,
5. mandate recordkeeping of manure applied during the winter months, and
6. impose manure storage requirements.

Mandating manure storage for livestock operations not permitted by DNR is problematic for the following reasons. If followed, this approach would require unrealistic levels of cost-share funds. While required storage may help farmers avoid spreading at undesirable times, mandatory storage can also cause other problems (e.g. spreading very large volumes in the spring). In addition, farmers with storage often run out of winter storage capacity as they add animals. In the end, more stored manure would increase the amount of manure that must be applied during short windows of time. On the other hand, livestock producers with storage have more manure management options than those without storage. Ultimately the solution turns on the management of manure—some farmers have a safe land base for spreading, others do not. Farmers need to take responsibility because they must bear the cost if they cause environmental harm.

Current regulations such as NR 243 require record keeping. Permit holders must have records related to production area structures and management including the emptying of storage structures, responses to manure storage overflows, corrective actions including emergency responses. They must follow record keeping requirements for land application activities including application rates and weather conditions. Other record keeping requirements cover sampling and inspections.

In addition to following current regulatory paths on state and local levels to address manure runoff incidents, the task force sees the need for new regulation in the following area. Currently, Wisconsin has a voluntary certification program for manure haulers operated by their professional organization. Other states impose requirements for licensing and certification of haulers. These licensing and certification programs are usually operated by state departments of agriculture, include training requirements, and may include others besides those who haul for hire. The majority of Wisconsin haulers work for CAFOs (operations over 1000 animal units), which are regulated by DNR. Contract haulers handle approximately 1/3 of the manure in the state, but this percentage is declining somewhat as CAFOs elect to haul their own manure. Certified applicators have a set protocol to use for notification and investigation of runoff events (investigations done by Professional Nutrient Applicators Assoc. of WI); however those guidelines can't be used for individual farmers because there is no overriding organization to conduct those investigations.

Recommendations

- € DATCP and DNR should work with the agricultural community, environmental interests and others to support additional cost-sharing funds to implement existing state regulatory requirements for the implementation of nutrient management plans on livestock operations.
- € DNR should be directed to finalize a water quality criteria phosphorous standard.
- € Sound record keeping performs a valuable function, and can be encouraged through incentives such as limited enforcement.
- € State agencies should evaluate approaches for fast-tracking review and permitting related to innovative technologies.
- € State agencies should implement state licensing or certification program for manure haulers, giving careful consideration to the scope of requirements imposed, fees or

other funding mechanisms for the program, and the class of persons to be regulated (e.g. contract haulers, medium and large livestock operators).

- ⌘ State agencies should evaluate how farmers can participate in state training programs related to manure hauling and application.
- ⌘ Regulations should be responsive to research findings that demonstrate risks of manure spreading during winter months and under conditions such as active snowmelts and predicted rain.

Protection of drinking water and groundwater

Land-applied manure has contaminated private drinking water wells. In the past, victims of well contamination have not had adequate remedies for compensation. In terms of private lawsuits, they have been hampered by litigation costs and problems in proving causation. Wisconsin's Drinking & Groundwater program has a well reimbursement program that covers chemical contamination but not bacterial contamination (and thus excludes manure contamination). With advances in water testing, we can better pinpoint the cause of well contamination. Should well owners be afforded state compensation for manure contamination, agency administering the program needs to consider the condition of the well and other factors. The interests of the farm community are advanced if victims of well contamination have recourse to a simple and effective way to address their problems.

Recommendations

- ⌘ DATCP and DNR should revise or create a program that compensates well owners if their wells are contaminated by manure runoff events. This process must include a determination of funding necessary to pay potential claims.
- ⌘ DATCP and DNR should work with the agricultural community to fund a compensation program. The options for funding might include a risk pool or identifying responsible parties.
- ⌘ Any new or revised program should resolve administrative issues including investigative protocols to verify claims, and compensation for substandard wells that become contaminated.

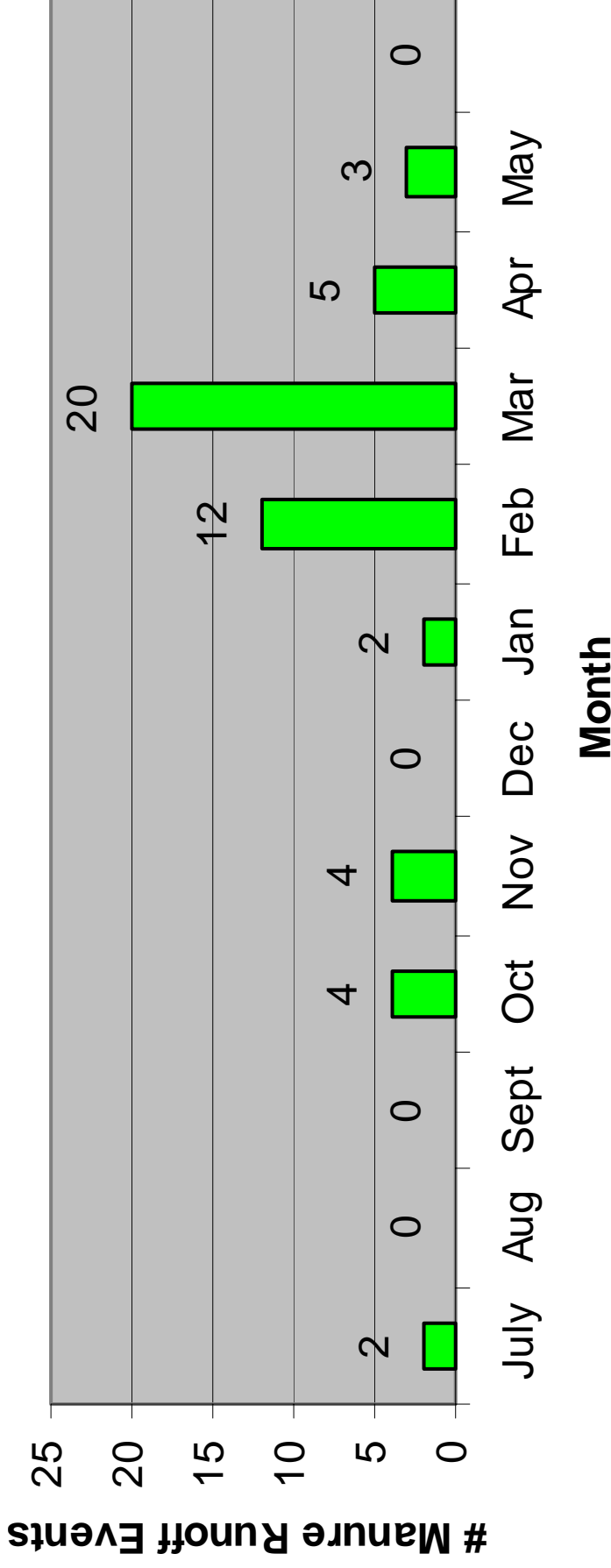
DNR will provide additional recommendations for groundwater and well protection.

Appendix 1

2005 Manure Runoff Events
DNR records

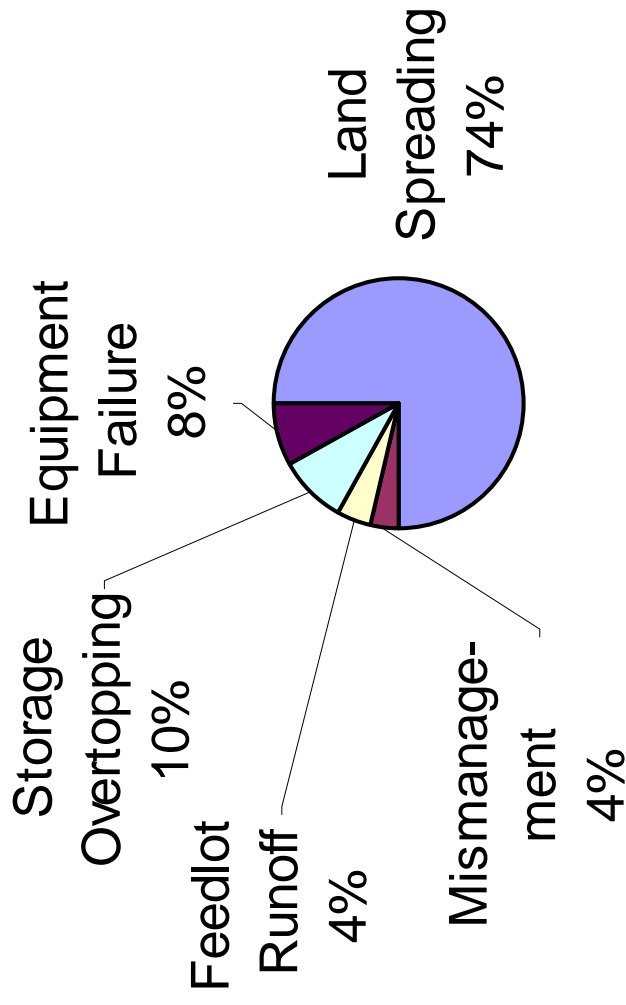
Distribution of 52 runoff events

Number of Reported Manure Runoff Events
Per Month (July 1, 2004 to June 30, 2005)





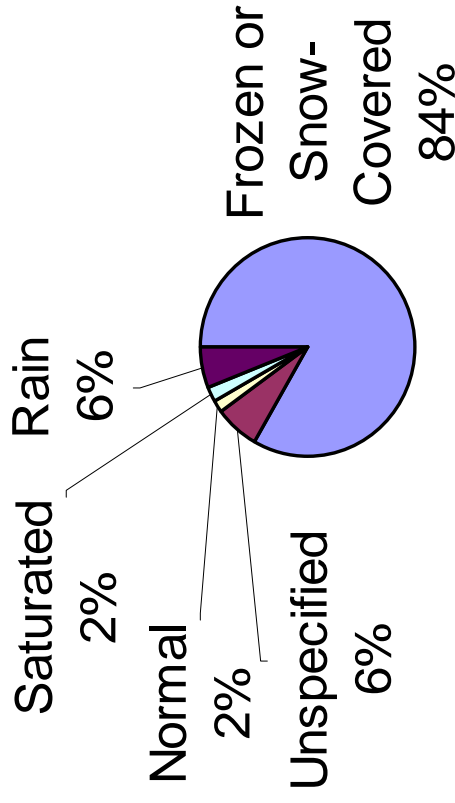
Causes of Manure Runoff Events



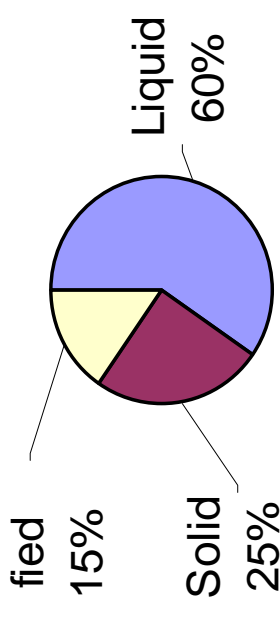


Manure types and application conditions

Soil Conditions during Landspreading



Liquid vs. Solid Applications
Resulting in Manure Runoff
Unspecified



Landspreading Done by:

7 Contract Hauler

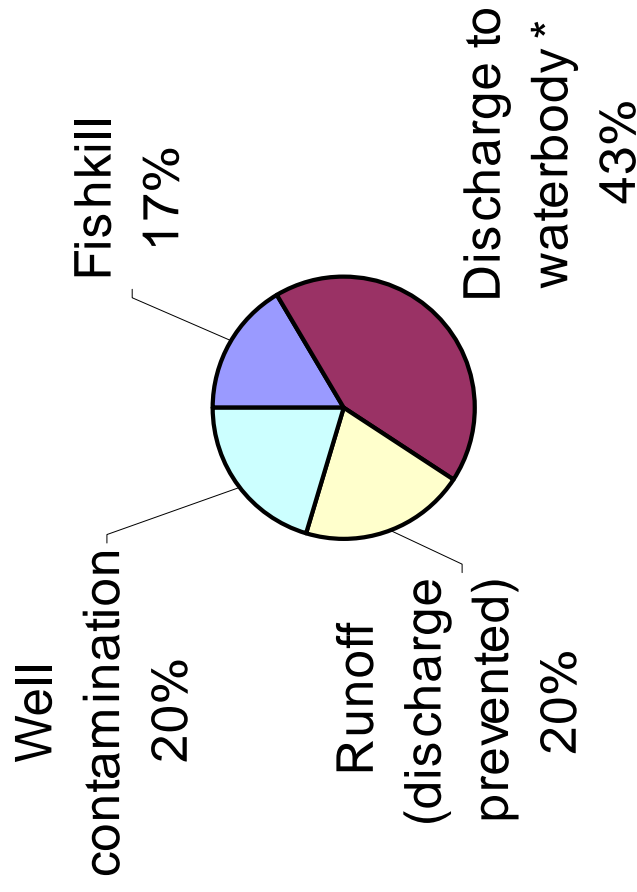
27 Operator

6 Unspecified



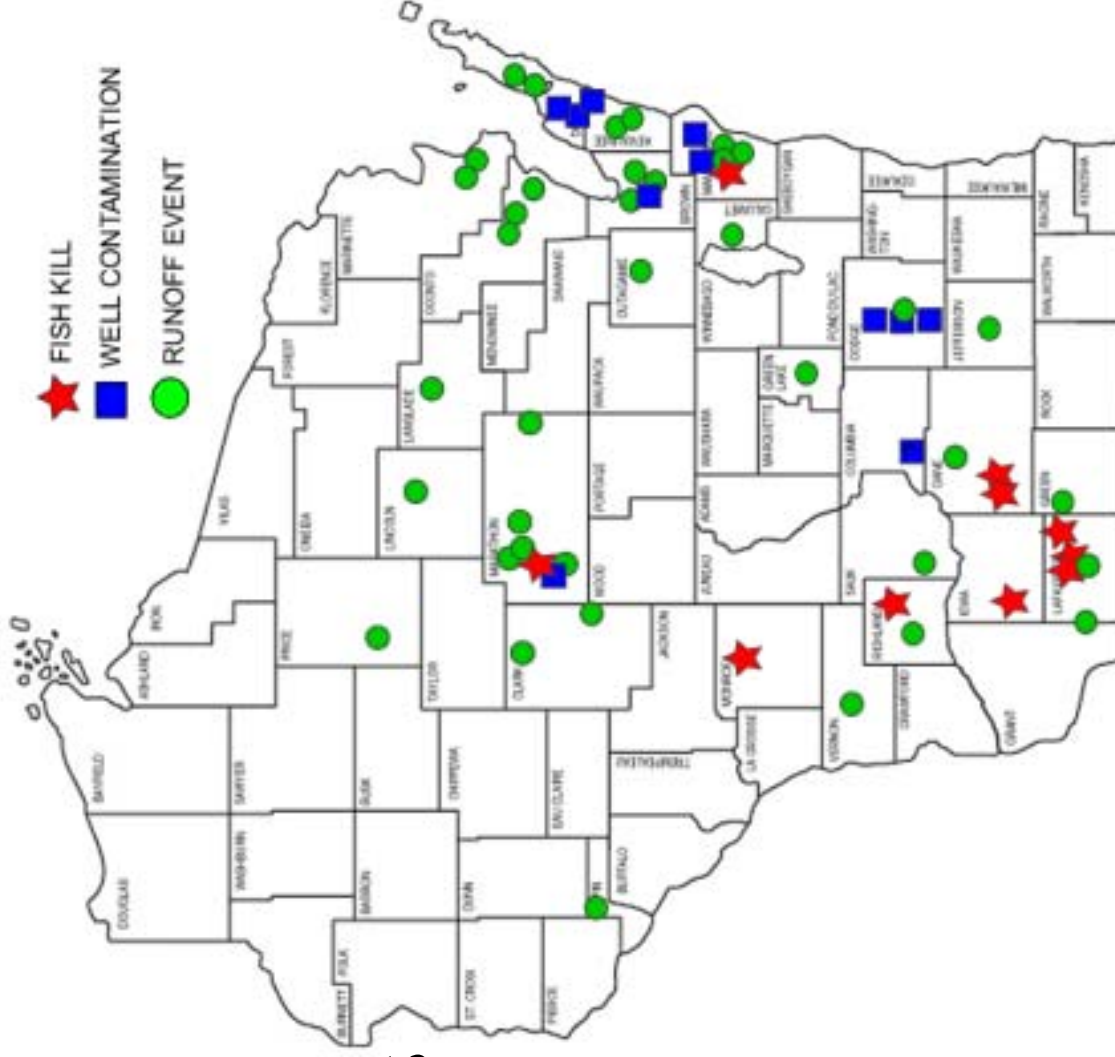
Impacts of manure runoff events

Some events resulted in multiple impacts



Manure-Related Fishkills, Well Contaminations and Runoff Events

March 1, 2004 - June 1, 2005



Overview of manure applicator certification, licensing and related programs in other states

Manure Management Task Force

November 10, 2005

The following table lists various state requirements regarding licensing or certifying manure haulers. The table lists requirements by state, but the research did not include every state. Research was conducted primarily using web sites. These were particularly useful websites:

- ∄ <http://www.pork.org/> National Pork Board website.
- ∄ http://cfpub.epa.gov/npdes/afo/statecompend.cfm?program_id=7 EPA's State Compendium of Programs and Regulatory Activities Related to Animal Feeding Operations
- ∄ <http://www.nasda.org/joint/07-2001CAFOupdate.pdf> A 2001 National Association of State Departments of Agriculture (NASDA) survey of waste and manure management regulations
- ∄ <http://www.uwex.edu/ces/regionalwaterquality/Flagships/Haulers.htm> A multi-state Cooperative Extension "Flagship Project"
- ∄ <http://extension.agron.iastate.edu/immag/ppstohtreg.html> Iowa Manure Management Action Group

Kevin Erb provided supplemental information for several states listed in the table. In certain cases, a state programs were not included in the table where the program appeared similar to other state requirements or its requirements were not clear.. The annotation "NA" in the "Type of Program" column doesn't necessarily mean that the state doesn't have a permitting or certifying program; it means it was not clear what the requirements are very similar to those in another state program.

State	Type of Program	Administering agency or entity	Requirements	Who must participate	Comments
AL	Certified Animal Waste Vender	AL Dept of Agriculture and Industries	AL Cooperative Extension Service (CES) 16 hr training program	Persons in the business of removing animal waste from an AFO for land application at another site.	
AK	NA				
AZ	NA				
AR	Certification	AR Soil and Water Conservation Commission	AR CES 4 hr training program	Owner-operator	

State	Type of Program	Administering agency or entity	Requirements	Who must participate	Comments
CA	NA				
CO	NA				
DE	Certification	Dept of Agriculture	Nutrient generator certification: 6 credits Private nutrient handler cert.: 9 cr. Nutrient consultant cert.: 12 cr.	Anyone with 8 or more animal units, or who applies nutrients to 10+ acres	
GA	Certification	GA Dept of Agriculture	2 days of instruction; 70% score on written exam	Swine feeding operators; 8 hrs cont. ed. required every 2 yrs	
ID	Dairy operations only	IDA			Non-dairy operations do not have training requirements
IL	Certified livestock manager	IL Dept of Agriculture	U of I Extension contracts with IDA to provide training and materials	Persons working at facilities with >1,000 AU must pass written exam and attend approved course; < 1,000 AU, person must do either one.	
IN	NA				
IA	Certification	IA DNR	Watch a 3-hr videotape or take a 50-question multiple choice, true-false exam	3 types of certification: Confinement Site Applicator; Commercial Manure Service; Commercial Manure Service Representative	The Iowa Manure Applicator Certification Program budget for 2006 is approximately \$147,000 (Source: Angela Rieck-Hinz, Extension Program Specialist) (Erb)
KS	Permit/certificate	KS Dept of Health and Environment	6 hrs training; written test; cert. is good for 5 yrs.	CAFO operator; does not address haulers, per se.	A swine facility operation with an AU capacity of 1,000 or more that is required to have a permit must also obtain a swine waste management and pollution

State	Type of Program	Administering agency or entity	Requirements	Who must participate	Comments
					control system operator certificate. Certification is required for swine facility operators who maintain or supervise a swine waste management or pollution control system Nothing specific found on licensing of commercial manure applicators. (Erb)
KY	NA				
MD	Two classes of certification: “Certified farm operator” (CFO) and “Certified nutrient management consultant” (CNMC)	MD Dept of Agriculture	CFO must have at least 2 hrs training in the first year, and at least 6 within three year renewal, and pass written exam. CNMC: College degree in agriculturally-related area, 1 yr experience, or combination of nutrient management education and practical experience acceptable to the dept.	An AFO owner/operator applying nutrients to >10 acres must ≠ have an applicator voucher from MDA; ≠ Be a CNMC or CFO; or ≠ Hire a CNMC Anyone hired to apply nutrient to ag land must either be a CNMC or work under the supervision of a CNMC	Initial licenses for both are good for one year; renewals are for three years
MI					
MN	State licensing program (commercial animal waste	MN Dept of Agriculture	1. Obtain and renew license through training and testing 2. Apply manure properly 3. Provide proof of financial responsibility	Any person or business who manages or applies manure “for hire” [By 2005, facilities over 300 AU that do not have a	Budget unknown; it costs \$10,000 just to keep track of people and send cards (email, David Schmidt, MN Extension) (Erb)

State	Type of Program	Administering agency or entity	Requirements	Who must participate	Comments
	technician)			MMP need to either: 1) develop a MMP for their operation, or 2) hire a commercial animal waste technician to apply manure, or 3) be licensed as a private manure applicator. Erb]	(A license fee of \$50 for 3 years does not cover costs of program administration. Reduce license cycle to annual license and increase license fees.) (Erb)
MS	Training required for CAFO owner/operator	MS Dept of Environmental Quality	8 hrs annual training approved by MDEQ	Owner/operator	Hauler not required to have training
MO	Certification	MDNR	Experience with CAFO waste management system and 30 hrs training for “wet” systems; 18 hrs for “dry”	Written test (pass = 70%)	Land application may be conducted by CAFO operator trainees or certified operators; during application a certified CAFO operator must be present and in direct communication with waste system personnel.
MT	NA				
NE	Permit	NE Dept of Environmental Quality	The CAFO permittee, authorized rep. or employee must attend/complete a land application training program approved by NDEQ within 180 days of permit coverage unless training was completed in the previous 5 years. Additional training is required every 5 years. The permittee is	Livestock operation owner/operator (permittee)	Doesn't seem to apply to manure haulers (Erb information corroborates what I collected)

State	Type of Program	Administering agency or entity	Requirements	Who must participate	Comments
			responsible for insuring that the required training and training records are maintained.		
NY	NA				
NC	Certification (Animal waste management system operator)	NC Division of Water Quality	Complete a 10-hr training course on operating an animal waste management system; take and pass an exam	Animal waste management systems including land application must be operated or directly supervised by a certified operator.	If an applicant fails the exam 3 times, he/she must attend/complete the training program before taking the exam again.
ND	NA				
OH	Certified livestock manager (CLM)	ODOA	Farmer or custom applicator must attend 3 core training sessions and 3 elective sessions, complete an application form, and pay \$30; 10 hrs continuing ed every 3 yrs is required.	CAFOs must be managed by anyone who manages/handles manure at a CAFO; anyone who land applies more than 4,500 dry tons or equivalent (25,000,000 gallons) of manure (not including bedding) a year. [This assumes 4.5% solids]	Land applicators do not need certification; land applications at CAFOs must be supervised by certified person.
OK	Certification for poultry manure applicators	OK Dept of Agriculture, Food and Forestry	Poultry manure applicator training content, hours and written tests are not specified.	All CAFO employees who land apply manure must be trained. CAFOs determine appropriate training; training hours and written tests are not specified.	Commercial or private poultry waste applicators are required to be certified by Oklahoma State Board of Agriculture. Every certified poultry waste applicator is required to file by December 1 of each year an annual report with the State of Agriculture, Food, and Forestry regarding all

State	Type of Program	Administering agency or entity	Requirements	Who must participate	Comments
					poultry waste land-applied by the applicator for the period from July 1 of the previous year through June 30 of that year. (Erb)
PA	State certification program	Dept of Agriculture	<ol style="list-style-type: none"> 1. Obtain and renew certification through training and testing 2. Apply manure according to approved NM plan or balance sheet 3. Maintain records 	Any person or business that “commercially” hauls or brokers manure	
SC	Mandatory “manure broker” certification since 1999	SC Dept of Health and Envir. Control	Full-day (6.5 hrs) training program by Clemson University (SC CES) which must include swine component. Pass 5-7 page exam, 10 hrs recertification credit every five years.	Clemson has developed different training programs for dairy, poultry and swine manure managers	<p>Hauler hired to apply manure on producer’s own farm are covered by the producer’s certification.</p> <p>SC has a “Land Applier” category, farmers who buy manure from a grower for only their own farm. The land applier is certified and has his/her own nutrient management plan with SCDHEC.</p> <p>This program supports manure brokering activities where brokers actually buy manure from growers, then sell it to other farmers and apply it for them. (Erb)</p>

State	Type of Program	Administering agency or entity	Requirements	Who must participate	Comments
SD	NA				
TN	NA				
TX	NA				
VA	Training required	Virginia Dept of Conservation and Recreation Quality	A college degree in an agriculture-related major and one year of job related experience; without a college degree, a combination of education including nutrient management related courses or training and a minimum of three years of job related experience.	Nutrient management planners (or land application supervisors who meet the definition of operator)	
WI	Voluntary professional certification	Professional Nutrient Applicators Association; UW CES and other partners	Meet training requirements	Voluntary participation (50% of haulers)	

Prepared by Dennis Presser, DATCP, November, 10 2005

Potential surcharge on milk to help pay for environmental protection

Manure Management Task Force

November 10, 2005

At the October meeting, Wally Lueder raised the idea of creating a milk surcharge to pay for any environmental practices that might result from the recommendations of the Task Force. He suggested a \$2.00 per gallon surcharge imposed on the retail price of milk.

As defined in the American Heritage Dictionary, “surcharge” means “an additional sum added to the usual amount or cost.” As the term is defined and used, a surcharge tends to imply “an additional or excessive burden.” The implied meaning of surcharge reflects the inherent challenges, barriers and burdens related to imposing additional costs.

Revision of the proposal

After discussion with experts, it was determined that the proposed surcharge of \$2.00 per gallon was not realistic. Among other reasons, this added cost would nearly double the retail price of a gallon of milk. Staff evaluated a more realistic surcharge of \$2.00/cwt on fluid milk.

Table A: Fluid Milk Produced in 2004				
Column A	Column B	Column C	Column D	Column E
Wisconsin Cows	Pounds of Milk per cow	Milk production (in hundredweight or cwt)	10% milk produced for fluid market (in cwt)	Gallons of fluid milk (12.5 gallons per 100 pounds of milk)
1,241,000	17796	220,848,360	22,084,836	276,060,450
Source: Wisconsin Agricultural Statistics 2005				

Based on the pounds of milk for the fluid market (Column D), a surcharge of \$2/cwt would yield a little over \$44 million. This is nearly four times the funds allocated annually by DNR and DATCP for landowner cost-sharing of conservation practices.

Point of collection for the surcharge

A surcharge can be collected at different points in the supply chain (e.g. thorough processors or retailers). Assuming that the surcharge is collected at the retail level, and further assuming that all fluid milk is sold in Wisconsin, a surcharge of \$0.16 would generate about \$44 million. For the consumer, the price of milk would increase about 8% to \$2.16/gallon.

Challenges, barriers and burdens

It appears that no federal laws would preclude the state for imposing a surcharge on Wisconsin milk. However, the surcharge may raise legal issues if it is applied to out-of-state milk. See Appendix

From an economic standpoint, the market will exert pressures that could undercut the benefits of the surcharge. If retailers collect the surcharge, they may have an incentive to purchase out-of-state milk not subject to the surcharge. With imported milk, a retailer could increase its profit margin, or sell the product for less. If processors collect the surcharge, they also might have an incentive to purchase cheaper milk from out-of-state farmers. In either case, the demand for Wisconsin fluid milk may decline, negatively affecting those in the supply chain particularly producers. The long-term impacts might include decisions by processors to locate out of state to better access to cheaper milk.

Appendix

An interesting surcharge case study¹

At one time Maine and Massachusetts had similar dairy price supports; the “Maine Dairy Farm Stabilization Act” (“the DFS Act”) had two components: it taxed packaged fluid milk sold in Maine (whether produced in- or out-of-state), and it provided a rebate of the funds collected to in-state dairy farmers. The first handler in Maine collected and paid the tax, regardless of whether the first handler was a wholesaler or a retailer who sold milk packaged out of state. The tax varied between 0-5 cents per quart of milk and increased as the basic price of milk fell below the target price of \$16.00/cwt (later \$16.50/cwt). The statute directed the State Treasurer to segregate the proceeds from this tax and distribute 94% of the funds to in-state dairy farmers in proportion to their milk production. The Massachusetts pricing order imposed an assessment on fluid milk sold by Massachusetts retailers and distributed the amounts collected to Massachusetts dairy farmers. The U.S. Supreme Court declared the Massachusetts arrangement “clearly unconstitutional” in West Lynn Creamery, Inc., v. Healy, 512 U.S. 186 (1994). Maine’s DFS Act was struck down based on the West Lynn Creamery decision.

However, in January 1995 the Maine Legislature enacted “An Act to Continue the Fee on the Handling of Milk,” (“the 1995 Act”).² The 1995 Act assessed a surcharge on milk handlers nearly identical to that previously mandated by the DFS Act but directs that the revenues generated be deposited into Maine’s general fund. Shortly after the effective date of the 1995 Act, as part of three successive omnibus spending bills for state government, the legislature appropriated to in-state milk producers \$1,500,000 for the period March 1995 to June 1996, \$4,050,000 for the period July to September 1996, and \$3,150,000 for the period July 1996 to June 1997.

Maine used the Tax Injunction Act (28 USC § 1341) (“the TIA”), to defend its actions. The TIA states “[t]he district courts shall not enjoin, suspend, or restrain the assessment, levy or collection of any tax under State law where a plain, speedy and efficient remedy may be had in the courts of such State.” Two conditions must be satisfied before the TIA will deprive a federal court of jurisdiction: first, the challenged impost must constitute a tax; and second, the State must furnish an adequate alternative to a federal-court remedy.

The classic “tax” is imposed by a legislature upon many, or all, citizens. It raises money, contributed to a general fund, and is spent for the benefit of the entire community. The classic “regulatory fee” is imposed by an agency upon those subject to its regulation. It may serve regulatory purposes directly by, for example, deliberately discouraging particular conduct by making it more expensive. Or it may serve such purposes indirectly by, for example, raising money placed in a special fund to help defray the agency’s regulation-related expenses.

Courts facing cases that lie near the middle of this spectrum have tended . . . to emphasize the revenue’s ultimate use, asking whether it provides a general benefit to the public, of a sort often financed by a general tax, or whether it provides more narrow benefits to regulated companies or defrays [an] agency’s cost of regulation.

¹ This case study is based on Cumberland Farms, Inc., V. Tax Assessor, State Of Maine, and Treasurer, State Of Maine, 1st Cir. Ct. of Appeals, <http://www.law.emory.edu/1circuit/june97/96-2353.01a.html> the second of two lawsuits brought by Cumberland Farms, Inc., a convenience store chain, against Maine’s milk surcharge.

² This law was later repealed and recreated as Title 36, Chapter 721, MILK HANDLING FEE (HEADING: PL 2005, c. 396, @8 (new))

- ⊄ The fact that the milk handling surcharge was imposed by the state legislature rather than by an administrative agency suggests that it is a tax rather than a fee.
- ⊄ The fact that the revenues raised from the surcharge go into Maine's general fund and are spent for the benefit of the citizenry as a whole also favors a finding that the milk handling surcharge is a tax.
- ⊄ The fact that the responsibility for administering the statute is assigned to the State Tax Assessor suggests that it is a tax, not a fee.
- ⊄ So too does the fact that, throughout the body of the 1995 Act, the legislature consistently refers to its milk surcharge as a tax.

It is apparent that the surcharge's stated purpose is tax-like; in enacting it, the state legislature described it as a means of raising general revenues. Still, we recognize that the inverted structure of the surcharge furthers a regulatory purpose - to ensure stable (if elevated) milk pricing - and thus pulls the other way. Finally, the surcharge is imposed only on handlers of milk, not on all citizens (or even on all businesses); in this aspect, the surcharge more resembles a fee. The most salient factor in the decisional mix concerns the destination of the revenues raised by the impost - and here, the revenues go into Maine's general fund. Although this element alone is not always decisive, it is particularly important where, as here, the stated purpose of the impost is to garner revenue.